GRUMMAN
planenews

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Aerospace offers incentive to retire

For a limited time only, Grumman Aerospace is offering slightly over 6,000 pension-eligible Grummanites a special incentive to retire early.

"As many Grummanites are aware, Grumman Aerospace is under continuous pressure to reduce costs in order to enhance its competitive edge in the very competitive aerospace industry," states Dan Knowles, vice president of Personnel and Administration. "As part of this effort, we have determined that some tightening of the workforce is possible without disrupting our production schedules or losing necessary skills.

"We believe a considerable number of Grummanites — especially those with long service — would be interested in early retirement, if given an incentive to do so," continues Knowles. With this in mind, the company has approved the incentivized early retirement program which offers eligible Grummanites incentive pay to retire early.

Pension-eligible Grummanites are invited to participate in this voluntary early retirement plan. Plan details were mailed to all eligible Grummanites two weeks ago. "It is strictly voluntary and will be available for a limited time only," stresses Knowles. Eligible Grummanites must decide whether or not to participate by Tuesday, May 1, and must retire by May 31.

Those who elect to participate in this plan will receive incentive pay based on the number of years they have been working at Grumman. For instance, a person with 20 years' company service will receive 20 weeks pay; a 25-year Grummanite, 26 weeks pay; a 30-year person, 32 weeks pay; and a 40-year Grummanite, 46 weeks pay.

Here are a few popular questions/

(Continued on page 5)

The X factor. *On Thursday, April 19, attendees at the annual Grumman shareholders' meeting got a program update on the X-29 and a report on the company's strong performance in 1983. See pages 6 and 7.*

Teamwork pays off

Grumman team helps rescue Solar Max

On Sunday morning, April 8, millions of TV viewers watched as Shuttle Astronaut George "Pinky" Nelson tried in vain to latch onto the rotating Solar Max satellite. Untethered to the Shuttle, Nelson finally had to give up and return to the Shuttle.

Mission in jeopardy

A band of 23 Grummanites stationed at NASA's Goddard Space Flight Center in Greenbelt, Maryland, knew right then that they were in for some long, tough days. As flight operations manager for the Solar Maximum Mission satellite, it was their baby up there tumbling around in space. The repair job slated for this April Shuttle mission was in jeopardy — and so was the actual life of the Solar Max.

The team's top priority was to stabilize the space satellite so the Shuttle's remote manipulator arm could grapple it and bring it aboard the cargo bay for repairs. Simply put, but a lot of groundwork had to be done.

"After a couple of hours of trying to stabilize the spacecraft, NASA decided that we should reload the Solar Max onboard computer with new programming designed to stop the spin rate," recalls Joe Blazosky, Grumman program manager at Goddard.

Reloading a computer that's in 300-mile-high orbit in space is a tedious process, but by 7 o'clock that night, the Grummanites had completed the two-and-a-half hour task. "They did a fantastic job . . . .

(Continued on page 4)

what's inside

Rep. Addabbo (D-NY) addresses PAC group. See page 2.

First A-4 takes to the skies over St. Augustine. See story on page 3.

The satellite connection: Automated Telemetry System takes on a new dimension. See page 8.

Was it a bear or bull market for EIP investors? Find out on page 9.

PAC meeting notes

Addabbo: U.S. can't afford a spending spree

Congressman Joseph Addabbo (D-N.Y.) shared his views of the defense budget with members of the Grumman Political Action Committee at the annual PAC meeting, held on Wednesday, April 18.

Addabbo, whose district borders Nassau County on the west, was the keynote speaker at the Plant 4 meeting. The U.S. representative is a member of the House Appropriations Committee; he also serves as chairman of the Defense Appropriations Committee.

Also present were four other members of the Long Island congressional delegation — Bill Carney, Norman Lent, Ray McGrath and Bob Mrazek.

Commends PAC for its activity

Addabbo commended the Grumman PAC members for "taking an active role in government." For too many years, Americans are failing to take part in the democratic process — especially when it comes to casting their ballot, laments Addabbo. He stated that during the last three administrations, Americans were governed by minority administrations "voted in by less than 50 percent of the eligible voters."

The first chairman of the Defense Appropriations Committee to hail from the Northeast, Addabbo also commended the Grumman attendees for designing and building "quality merchandise for our nation's defense." He also wished that Grumman would get bigger, better, and more contracts in the future. "New York and Long Island will prosper," he added.

As for the 1985 defense budget, Addabbo stressed that there had to be "massive reductions . . . . There are too many new starts." With the nation's deficit approaching an estimated trillion dollars by 1989, he stated that the U.S. "can't afford a spending spree. We have to start making hard choices."

Addabbo ruled out "stretch-outs." "They only add to the cost in the long run," he said. The congressman firmly believes that cuts can be made that "will not adversely affect our nation's defense."

In the business portion of the annual PAC meeting, Dave Walsh, PAC Steering Committee chairman and Grumman Aerospace vice president-Marketing, read two resolutions for passage by PAC members.

The PAC approved a resolution to re-elect Grumman Data Systems Vice President John Bohlander, PAC Steering Committee vice chairman, and to re-elect Bill Ryan assistant treasurer.

PAC members also approved the motion to commend Jack Carroll, Grumman Corporation vice president-Community Relations, and Steve Dely, Grumman Allied Industries' secretary, for their service on the Steering Committee in past years. They recently completed their tenure on the committee.

Top priority. *Grummanites had the chance to ask their local congressman about the national deficit, health care and defense cuts at the PAC meeting.*

Keynote speaker. *Congressman Joseph Addabbo (D-N.Y.) expressed his views of the nation's defense budget with members of PAC on April 18.*

Stars and stripes. *Congressman Norman Lent shares his view of the nation's economy with PAC members at the annual meeting. Fellow members of the LI congressional delegation also spoke: Bill Carney, Ray McGrath and Bob Mrazek.*

obituaries

REGINALD G. ROGERSON of Flight Development Operations, Plant 7, died April 1 at the age of 61. He had been with the company since 1963 and resided at 18 Franklin Street, Patchogue.

COSMO T. BARBARO of Quality Engineering, Plant 35, died March 30 at the age of 60. He had been with the company since 1965 and resided at 96 Radcliff Dr., Brentwood.

FRANCIS J. SCHMIDT of Food Service, Plant 3, died March 31 at the age of 62. He had been with the company since 1968 and resided at 7 Chestnut Street, Islip.

WALTER A. SCHEU of Materials Accounting, Plant 30 died April 11 at the age of 50. He had been with the company since 1951 and resided at 2 Autumn Dr., East Northport.

CHARLES S. MACIARZ of Controls, Plant 2, died April 13 at the age of 62. He had been with the company since 1951 and resided at 53 Durham Rd., New Hyde Park.

Personals

My family and I wish to express our sincere thanks and appreciation to my friends, co-workers and ESO for their kind expressions of sympathy during the recent loss of my brother. Bill Dautrich

My family and I wish to express our sincere thanks and appreciation to my friends, co-workers and ESO for their kind expressions of sympathy during the recent loss of my mother. Sandy Giacoia

My family and I wish to express our sincere thanks and appreciation to our friends, co-workers and ESO for their kind expressions of sympathy during the recent loss of our mother. Jim Crane

On behalf of my family and myself, I would like to thank our friends and co-workers for their kindness and sympathy during the recent loss of my mother. Joseph P. Armstrong

My family and I wish to thank all of Doug's friends, ESO and his co-workers in the Power Plant Group for their kind expressions of sympathy. The Alexander Family

My sincere thanks for honoring me with a wonderful retirement party. It was the most memorable event of my years at Grumman. I will always treasure the friendships made during those years. Jerry Kappel

To our friends in the Material Department in Plant 6: My wife and I wish to express our appreciation and thanks to the people who made my retirement party possible. I would also like to extend my farewell and God's blessings. Frank Vagnoni

My husband and I wish to express our thanks and appreciation to our friends, co-workers and ESO for their kind expressions of sympathy during the recent loss of my mother. Shirley Reiss

My family and I wish to thank our friends and co-workers for their kind expressions of sympathy during the recent loss of my father. John Sims

Correction. *In the last issue, these two Grummanites were misidentified. The 25-year anniversarians are Isadore Fried (R) of Methods Engineering and George Faeth of Operations; both hail from Plant 43.*

First of many. *With Grumman test pilot Pete Tummillo at the controls, the first A-4 Skyhawk rebuilt by Grumman St. Augustine recently completed its first test flight.*

St. Augustine celebrates

First Skyhawk soars on its maiden test flight

The morning of Thursday, April 12, was a sunny one in St. Augustine Florida — just perfect, in fact, for a successful first test flight of the Grumman St. Augustine-rebuilt A-4 Skyhawk.

More down the line

The aircraft is the first of 34 A-4s and six TA-4 trainers being rebuilt at GSAC for the Royal Malaysian Air Force under a $125 million contract. Test pilot Pete Tummillo checked out all A-4 systems for their first phase of airworthiness. The duration of the flight was an hour and fifteen minutes.

"This event was an exhilarating accomplishment for all who have intensified their efforts over the past 15 months to make the flight happen on schedule," comments Marty Dandridge, A-4 managing director. The A-4 modification program has been under way since January, 1983, and is scheduled for completion in 1985.

The 40 A-4 Skyhawks had originally been retired by the U.S. Navy to a storage facility in Arizona. The GSAC-refurbished versions will form the backbone of the Malaysian Air Force. In the shop, the A-4s are partially disassembled and completely rewired; drag chutes are added; some airframe changes are made; and new avionics are installed. The planes are also cleaned inside and out; all corrosion is removed.

Trainers progressing

The GSAC crew also began work recently on the first of the six TA-4 trainers. The plane's forward section, converted at Bethpage to a two-seater configuration, is being rejoined with the tail, wings, and engine. Following reassembly, it will undergo a series of tests before its flight test in June.

May 18 rings in new five-digit dialing

Expansion means jobs, new office buildings, and sometimes, new ways of doing things. One change that is on the way for Grummanites in the Bethpage complex is the five-digit internal telephone call.

The conversion from four- to five-digit dialing will take place at 5 p.m. on Friday, May 18. The numeral "5" will be added before each existing extension number. Extensions will otherwise stay the same. In other words, an individual on Ext. 5118 will, starting May 18, be reached on Ext. 55118.

The move is needed to keep pace with the burgeoning numbers of Grummanites at Bethpage. As it stands, virtually all the available phone numbers in the "575" exchange have been exhausted.

You may well be curious as to how placing a "5" in front of everybody s extensions will add a new stock of phone numbers. Pat DeMonaco, senior telecommunications analyst in the Telecommunications Services department, explains that there are 9,999 numbers within the 575 exchange. However, the numbers 1000 through 1599 cannot be used with the current four-digit system.

That's because the phone system's off-site access codes (112, 113, 114, et al) and special function codes (for conference calls and the like) fall between 1000 and 1599. Prefacing each phone number with a "5" frees up those extra numbers — 600 of them, to be exact.

For Bethpage only

The switch will be made for Bethpage numbers only — extension numbers at all other sites will remain the same, and Grummanites at Bethpage will dial them the same way as always. Also, since the new "5" in the numbers is just the last number in the "575" exchange, callers from outside the main Grumman phone system will use the same numbers as before. For instance, that individual on ext. 4321 will still get calls from the outside at 4321, just as always.

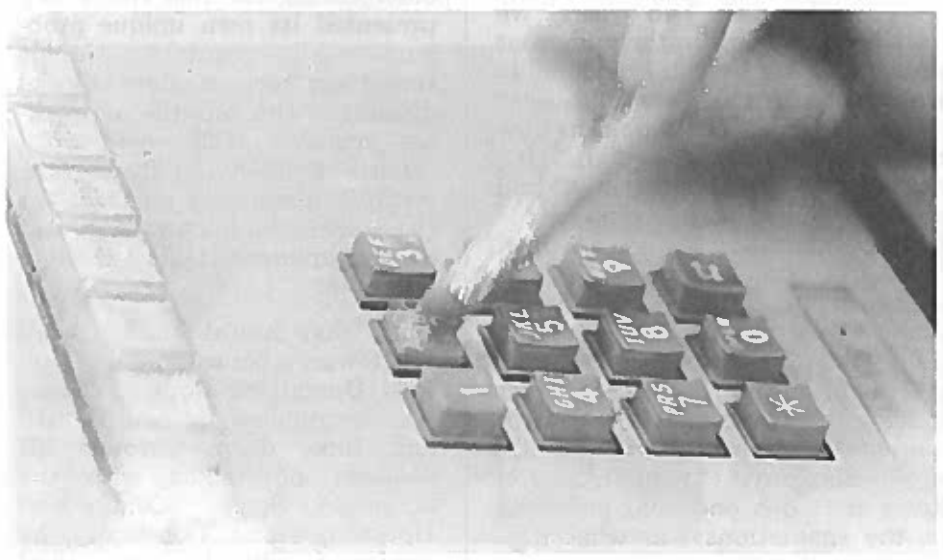
Eventually, a "576" exchange will be incorporated into the system, since it won't be long before the new supply of extension numbers is used up. At that point, those numbers will be given out to new employees, and for interoffice dialing, will begin with the numeral "6".

In order to facilitate the change, Telecommunications Services setting up a hotline to answer Grummanite's questions. The number to call is Ext. 1934. There will also be daily announcements on the public-address system and a printed message on the May 17 paychecks.

To further drive home the message, stickers will be placed on all phones, reminding Grummanites that five-digit dialing goes into effect on May 18.

Bob Gluck, manager of Telecommunications Services, is aiming for a smooth transition. His group will be meeting with department managers in the final weeks prior to the change to make sure employees are well-prepared.

The conversion will not be noticeable as a service interruption, according to phone company representatives, since it involves a pre-set modification of the system's software. So, the five-digit system will be up and running in time for the May 18 night crew.



A ring to it. *On Friday, May 18, at 5 p.m., the company will convert all Bethpage telephone numbers from four- to five-digits.*

GRUMMAN planenews

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Action center. *At Goddard Space Flight Center, Grummanites play a vital role in the Solar Max mission. Pictured are: (far L, top) Gary Gavigan and Dave Lozinski; (bottom L) Mike Swanhart; (center pix, L to R) Kevin Grady of NASA, Eric Barksdale, Marty Olstad, Art Livingston and Spence Meade; (top) Jim Harrison (R) and Eric Barksdale.*

Grummanites to the rescue

Solar Max escapes from death trap in space

(Continued from page 1)

very professional . . . . no panic, "states Blazosky.

With the computer reloaded, the next step was to monitor Solar Max as it went through the detumbling process.

Tumbling in space wasn't the only problem facing the Solar Max. Its huge solar panels, which supplied power to its onboard computer, transmitter, and other equipment, were no longer catching the sun's rays. "The batteries were discharging and we didn't know how long the Solar Max would keep working," reports Blazosky. If the batteries went dead, the Solar Max was doomed.

Meeting the challenge

With only the magnetic torquers, which use the earth's magnetic force, to guide the crippled satellite back to stability, the Grummanites spent long, tense hours in the Goddard Mission Control Room. "Magnetic torquers have very little muscle," says Blazosky. The process takes hours to complete.

It was more than coffee keeping the Grumman crew going — it was pure adrenelin. "You could bottle the energy," says Blazosky.

Because the Solar Max was losing power, the Grummanites shut off all the onboard instruments except for the computer and torque system.

Sometime after midnight, the satellite was finally stabilized. It was only rotating .02 degrees a second. The Grumman engineers then reloaded the onboard computer with the original control program and got the spin up to .5 degrees per second.

"That's the rotation that the astronauts had practiced on," says Blazosky. "Because the Shuttle's reaction control system's fuel was running low, it was decided to have the Solar Max rotating so the remote manipulator arm could grapple the satellite. At that rate they could have a few tries if they didn't succeed."

It was a success. The Solar Max was pulled into the Shuttle cargo bay and repaired by astronauts Nelson and James "Ox" van Hoften.

Ingenuity pays off

When the Solar Max was launched on February 14, 1980, the ground control and command of the spacecraft and its experiments became the responsibility of the Grumman team at Goddard. After 10 months of successful operations, however, fuse failures in the attitude control module left the Solar Max with no means to accurately point the spacecraft.

"For the past two years, we have been drawing up the numerous procedures on how the Solar Max would be repaired," says Blazosky.

He calls it a "cookbook on how to check out the spacecraft." It's about 120 pages long and had about 30 complete revisions in the last nine months.

During simulations with the Johnson Space Center, the Grumman team went through the numerous procedures of what must be done during the April repair mission. "NASA would throw in 'glitches' to see how we'd respond," says Blazosky. "Wouldn't you know it — not one fault practiced in the simulations was what happened Sunday."

Still, the Grumman team responded. The 12-hour work shifts pretty much went out the window. Some engineers stayed at their stations for hours because they were in the middle of a procedure. Cots were set up to catch a few winks when time allowed.

Now things are back to normal at Goddard. The Shuttle astronauts replaced the malfunctioning attitude control module and the main electronics box used in the coronograph/polarimeter experiment. The Grummanites have begun the 30-day checkout and calibration of the spacecraft before returning it to normal operations.

"Everything looks fine so far," signs off Blazosky.

'It was a total team effort'

Faced with only six hours of power remaining before Solar Max "died," the NASA team at Goddard — including 23 Grummanites — pooled its resources and saved the crippled, tumbling satellite.

"It was a total team effort," says Joe Blazosky, Grumman's program manager at Goddard.

Although months of training had included numerous simulated emergencies, the real emergency presented its own unique problems. All required prompt responses; each was a potential disaster. "The months of working together really paid off," reports Blazosky. Bill Stewart, NASA's operations manager for the Solar Max repair mission, had an experienced team working with him.

On that fateful Sunday, April 8, Stewart's console in the Payload Operations Control Center was surrounded by people, two and three deep. Through his headset, he talked with the Johnson Space Center in Houston, Texas. Constantly, he conferred with his two chief assistants — Grummanites Dave Douds and Jim Harrison. Around 9 p.m., things started to look better. The Solar Max's tumbling had slowed; the rotation rates were lowering. But the solar panels still were not getting the life-giving sunrays.

By 11 p.m., Stewart announced that the spacecraft now coming out of an eclipse behind the Earth, "might not survive another eclipse." He estimates now that they might have been as little as five minutes away from losing Solar Max.

Lady Luck intervened — as Solar Max emerged from the eclipse, its panels were pointing directly toward the sun. The spacecraft was saved.

Members of the Grumman team who saved the Solar Max are: Jim Barcus, Eric Barksdale, Alice Biebel, Joe Blazosky, Betty Blesse, Dave Douds, Gary Gavigan, Jim Harrison, Dave Irwin, Art Livingston, Dave Lozinski, Dave Lychenheim, Cheryl McGuire, Spence Meade, Linda Messina, Marty Olstad, Dick Ott, Cort Schult, Bob Stewart, Walt Swafford, Mike Swanhart, Harry Wajsgras, and Dave Yuhas.

Offering incentive to retire

(Continued from page 1)

answers about this limited-time-only program. If eligible Grummanites have specific questions about this plan, they are encouraged to contact Personnel Relations in Plant 28 on Ext. (111) 3521.

Who is eligible?

Eligible Grummanites include: anyone who is at least 50 years old and has 20 or more years of service or anyone who is at least age 60 and has one or more years of service. Employees who are within one year of their involuntary retirement date are not eligible.

In addition, Grummanites on approved leave of absence who satisfy the age and service requirements can elect to participate as long as they return to work in 1984 with the approval of the Medical Department. Grummanites who have already chosen to retire in April are also eligible — as long as they are not within one year of their mandatory retirement date.

On what salary will the incentive payment be based?

The plan benefit will be calculated on your base rate of pay (including shift differential, if applicable) at the time of your retirement.

How will I receive the incentive payment?

All incentive pay will be given in a lump sum. If you are entitled to less than 20 weeks of incentive pay, you will receive all your payment in 1984. If you are entitled to 20 or more weeks of pay, you may choose one of two options: (1) 20 weeks payment in 1984 and the balance in 1985; (2) the entire payment in 1985. The maximum payment anyone can receive is 52 weeks.

Can I be rehired after I retire?

It is not expected that employees who retire under this program will return to work at Grumman.

After I sign the Notice of Intent indicating my intention to retire under this program and I return it together with copies of the appropriate documents, what happens next?

You will be contacted by the Benefits Department to decide your pension option, to finalize your health insurance coverage and to review the options available under the Employee Investment Plan.

Next issue: May 11th

Romeo Cammissa. *Romeo and his wife plan on staying on Long Island after he retires next month.*

Stephen Teta. *He's ready to bid farewell to his Grumman co-workers after working for the company over 44 years.*

They can't pass up a 'fantastic' deal

The rumors had been spreading for weeks. Dozens of Grummanites who had been planning on retiring in March and April "changed their minds." They waited for the good word — and it was better than expected, according to many. For a limited-time-only, the company was offering an incentive to retire early — and so far, several Grummanites have signed up and are ready to turn in their badges for a little "R 'n R."

Romeo Cammissa, a liaison engineer for the A-6/EA-6B programs at Calverton, was planning on retiring March 31. In fact, his co-workers already threw him a farewell party in March. "But, then we started hearing the rumors, so I stayed on," says Romeo, who has worked for Grumman for 20 years. "It was a long wait. A lot of people started getting a little apprehensive. But, boy, was it a nice feeling when I got the letter in the mail."

His wife has been waiting for his retirement date for quite a while, and now it's just around the corner. Reflecting on his Grumman career, Romeo says, "I've been lucky . . . I've collected a lot of nice friends along the way. I certainly appreciate my 20 years here."

Stephen Teta is hanging up his Grumman hat after 44 years with the company. His friends had also given him a going away party. They gave him a fishing rod and Grumman mementoes.

"The program is fantastic," says Stephen, who works in Manufacturing Scheduling in Plant 25. "It's much better than what was rumored. I help up my retirement with my fingers crossed." While he was waiting to hear, he and his wife took a planned trip to Florida. And, when he returned, he got the good news. "Forty-four years equals a lot of money!" proclaims Stephen.

Golden opportunity

Tony Natale, a 41-year Grummanite, refers to himself as a "relaxing type of guy." Even though his wife will continue to work, Tony plans on retiring. "After a while, you get tired of the routine. Now I'm ready to loaf around the house, and play golf (he shoots in the 90s — 'not bad for an old man')."

As for the incentive pay, the foreman in Plant 1 says "it's found money. I'm healthy and feeling good. I plan on enjoying my retirement."

Tony Lazarek, leadman of Plant 5 Intra-plant Transportation, calls the special early retirement program "fantastic." He was "definitely planning on leaving in December, after 31 years at Grumman." Right now, he's making plans for the summer. "I'll probably putter around the house . . . there'll be plenty to do now that I have time."

Who will take his place? "I don't know," replies Tony, "but I wish them all God's blessing." And if they run into problems after Tony leaves? He quips: "If they have any questions, they can always call me back as a consultant."

Tony Natale. *The 41-year Grummanite is ready to head for the fairways next month when he retires.*

Tony Lazarek. *Rumor has it that his granddaughter's dollhouse will be built shortly after Tony retires.*

Another banner ye company doubles

Outside the Plant 4 hangar were an assortment of Grumman products, ranging from aircraft to yachts, delivery trucks to solar panels. Inside, visitors were treated to a dazzling audiovisual presentation on the futuristic Grumman X-29 technology demonstrator aircraft.

Indeed, much of the discussion at April 19's annual shareholders' meeting focused on the future — despite the fact that 1983 was a record year financially for Grumman. Sales and profits soared during the year to the highest levels in the company's 54-year history. Earnings rose almost threefold, to approximately $111 million. Sales rose 10 percent to about $2.3 billion. Grumman Aerospace sales rose about $242 million, or 13 percent, to $2.05 billion.

'We can create a whole new set of dynamics for Grumman in the 1990s and beyond.'

"In terms of financial performance, 1983 was the best in our history," Grumman Corporation Chairman Jack Bierwirth told attendees. "We set new records in sales, earnings, return on equity — every significant measure. But what's even more important is what's being developed and where we're headed for the future."

Bierwirth noted that in Aerospace — which accounts for the biggest share of Grumman's business — sales and earnings have improved each year since 1975. That puts the company in a strong position to invest "in the future of the company." One such investment will be a research and development expenditure of $70 million — double the 1983 figure.

"If we manage those investments as well as the record of the past 10 years indicates we have managed the growth and profitability of our basic business," he declared, "then I think we can create a whole new set of dynamics for Grumman in the 1990s and beyond."

Grumman Corporation President Joe Gavin pointed out that such a long-term business strategy has been in operation at Grumman Aerospace for the past 10 years. That strategy — making Grumman the leading integrator of airborne electronic systems — has now paid off.

"That strategy has enabled us to evolve all four of our Navy aircraft through several generations of electronic systems improvement," he said. "Today, they average twice the electronics content of comparable aircraft. As a result, each is without challenge in the job that it does."

Grumman has done that, Gavin added, while trimming unit costs.

"We have also accomplished production efficiencies so that today, the unit cost of each plane is less

X-29 funding, energy, futuristic radar

After the business meeting, Grumman Corporation Chairman Jack Bierwirth and President Joe Gavin fielded questions from the shareholders. The following is a sampling of the Q&A session.

Can you tell us precisely how much money the company is planning to spend on the research and development of the X-29 in 1984?

We currently plan to invest $25 million over and above the money we will receive from our research contract for the X-29. However, I think it is necessary to note that it is the nature of any research-and-development program — especially one as highly involved as this one — to incur further expenses as it progresses. As more information is developed, more research is needed. The reason we have committed ourselves to this program and are investing the money in it is that we believe it may very well lead to the design development of the next generation of production aircraft. Our investment in research puts us in an excellent position.

If it became necessary, could Grumman possibly support itself — energy-wise, without LILCO or would a move from Long Island be unavoidable?

We are currently studying the concepts of co-generation to produce energy from our existing operations. That option is still in the development stages and being intensively researched. As for leaving L.I., we have told the State and local governments that we want to and intend to expand our L.I. operations because that is where our home is. The problems with energy on Long Island are real and very serious. But we believe that there are solutions and that they must and will be found. The cost of power here affects not only the company but our employees, local suppliers, and the community as a whole. In the worst-case scenario, if LILCO failed, Long Island would go down the drain commercially. But we don't think that is going to happen. I believe an equitable and economical solution is coming.

In addition to the X-29, the company is also working on the development of conformal radar — a concept that would do away with the rotodome system now in use. How far along are we on this project and when do you foresee actual production use of it?

That is something that I can't really offer a definite answer on. Conformal radar is an exciting concept that I am pleased to say we developed in-house and have a patent on. I believe we will have a working display of the system some time in the next few years. The idea is still relatively new. So as far as when it will replace the present rotodome configuration, I can't say exactly. Time will tell.

ar for Grumman; R&D funds for '84

than it was in its original version, after taking into account the effects of inflation and adjusting for the changes in production rate. All this has been accomplished while adding very substantially to the capability of the system. Better does not necessarily cost more."

New versions

Gavin went on to outline what's in store for the near future. In electronic warfare, the ICAP II version of the EA-6B was set for rollout on April 26 (yesterday), while a fifth-generation Prowler is on the drawing boards. Toward the decade's end, Gavin expects the company to begin deliveries of the next-generation A-6 and F-14.

The company is also researching the possible use of jamming systems, akin to those it integrated into the EF-111, on various other aircraft, as well as VSTOL (Vertical Short Take Off and Landing) planes and something called conformal radar. The latter "will lead to a future generation Hawkeye, without the cumbersome radome, as the radars are integrated into the aircraft wings and fuselage," said Gavin.

The X-29 presentation gave shareholders a sneak peak at some of the technologies that program is working on. The presentation traced the development of the X-planes from the X-1 — the plane piloted by Chuck Yeager in the first supersonic flight — through the X-29. The X-29's forward-swept wings are only the most readily apparent of the advanced technologies it will employ, Gavin noted.

"The superior maneuvering capability of this configuration is made practical by Grumman's ability to apply composite materials in such a fashion that the structural properties of the wing are tailored to match its aerodynamics," Gavin explained. "Not as obvious as the wings, but perhaps of even greater significance for future aircraft design, is the sophisticated flight control system. This fly-by-wire system has multiple redundant modes, making it possible to fly this unstable aerodynamic configuration safely . . . providing primary control surface adjustment forty times a second."

A bright future is also in store for Grumman's space programs. Gavin gave high marks to the company's performance as a NASA subcontractor during the repair of the Solar Max satellite, which took place on the recent Shuttle mission. In view of President Reagan's call for a U.S. Space Station by the early 1990s, Gavin said Grumman is already doing preliminary research aimed at getting a chunk of the contractual "pie" later in the decade.

Commercial upswing

The non-Aerospace subsidiaries had strong showings also in 1983.

"The Grumman Data Systems Corporation has been making excellent progress and has refocused some of its planning for future growth," said Gavin, citing GDS' recent acquisitions of CTEC, Inc., of McLean, Virginia, and Computer Systems Support Corporation (CSSC) of Gaithersburg, Maryland. CTEC, now known as Grumman-CTEC, Inc., is a computer software and systems engineering firm with a specialty in intelligence and surveillance. CSSC, a privately-owned computer maintenance service firm, will operate as part of GDS' Systems Maintenance Services division.

"I think it's also worth mentioning that the Grumman Olson aluminum truck bodies have benefitted very significantly from the general economic recovery," he added, "at the same time that we have brought into production the Kubvan."

Bierwirth pointed to the new construction at the Bethpage complex as evidence of the company's investment in the future. The new buildings will house labs, electronic facilities, computing centers, and computer-compatible administrative facilities. And the building boom is taking place at Grumman sites off Long Island as well.

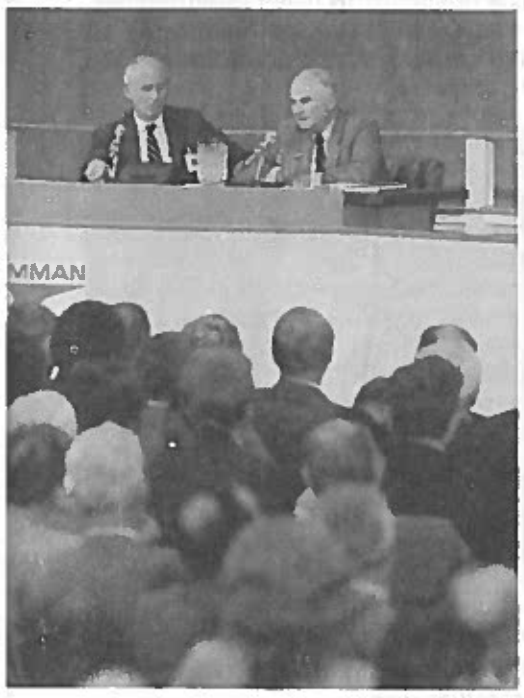
In addition, Bierwirth told his listeners about the current $250 million capital improvement project. "These physical assets, together with Grumman's greatest asset, its people, will take us into the next decades. We have a very high level of confidence that you will see the kind of growth that you deserve to see from this whole program."

Bierwirth commented that the research expenditures subtract from short-term earnings, but provide a healthy long-term business base. "Your letters and comments tell us that you believe this is the right policy for Grumman," he said. "I believe that it is also the right policy for many companies and for our country."

During the business segment of the annual meeting, the shareholders approved two resolutions.

The first was for the re-election of four directors to three-year terms. Re-elected were Kenneth Axelson, Jack Bierwirth, Joe Gavin, and John Sargent.

Shareholders also approved the employment of Arthur Andersen & Co. by the Board of Directors as the independent certified public accountants for 1984.



Shareholders optimistic, too

After the annual shareholders' meeting, conversation among the attendees centered around the company's commitment to the future. Grumman Corporation Chairman Jack Bierwirth had announced earlier that the company is increasing its research-and-development funding from $35 million to $70 million in 1984. He noted that $25 million of that R & D investment is earmarked for the X-29.

By and large, shareholders not only voiced approval for the increased investment, but were also enthusiastic about the futuristic X-29 endeavor.

"I think that, without a doubt, the investment increase is a good idea. It's the proper move to position the company for solid long-term growth," commended shareholder Donald Martinolich. "Jack Bierwirth put it properly when he noted that the Grumman investors are looking for growth potential and long-term return strength.

"That kind of investor is not worried about the size of the investments that are necessary to insure the continued vitality and future business growth of the company. After all," stated Martinolich. "innovations like the X-29 cost money — so we invest now and reap the benefits of our spending later. Hopefully, at a big profit, of course."

Indeed, the X-29 program seems to have brought out the adventure in the hearts of many Grumman shareholders. Retired Grummanite and shareholder Joachim Voss said, "I certainly hope it will be a big breakthrough for the company. It looks to be the future for the industry and it's good for Grumman to be in the lead with its research-and-development program. The money we are investigating is a lot, but it is part of heading in the right direction. The future is going to cost money — I guess there is no way around that."

Besides the X-29, Grumman's continued success with its subsidiary products, such as Pearson Yachts and the new Kubvan, is heartening some investors.

European American Bank representatives David Simson and Laurel Abrams noted that, "As bankers, we can see the need for investments for the future and product diversification as a means of spreading one's assets. Grumman's other product lines are doing well. A major reason for that success appears to be a conscious effort by the company to concentrate on specific areas of expertise and the application of its engineering know-how."

The two bankers added, "As for the investments in the X-29 program, well, that's money in the bank, if you'll pardon the pun. Of course, some people might only see a large amount of money going out without any tangible or immediate return. But that is a short-sighted view. In Grumman's highly technical and very highly competitive field, substantial investment is necessary to secure an edge and insure a future in the field.

"Look at it this way: the shareholder invests in the company and the company invests in itself — both investments are made for future profits. That's the name of the game," they concluded.

A new dimension in real-time testing

Satellite links ATS to California test site

Test engineers wearing headphones sit staring at their computer terminal screens as information is printed out at lightning speed in front of them. Other computers feed information out on long reams of graph paper, translating electronic transmissions into readable engineering information. A test pilot's voice crackles over the engineers' headphones. All this is a familiar scene at Calverton's Automated Telemetry Station (ATS) as a "real-time" flight test is conducted.

The big difference this time, though, is that the airplane is not flying in the immediate vicinity of the Calverton base, relaying information directly from the sky above to the engineers conducting the test on the ground. In this case, the airplane being tested is flying some 3,000 miles away above the Dryden Flight Research Facility at Edwards Air Force Base in sunny California.

What is going on in the Calverton ATS building is a proof-of-concept test for off-site flight test via real-time satellite data links. The telemetry data stream from the airplane flying in California is being relayed via satellite over 20,000 miles out in space to the Calverton flight test engineers.

'So far, it looks like the concept works — and works very well.'

"Real-time flight testing is not a new concept for us. It is something we have been doing for some time now. What is new is the concept of doing real-time flight testing on an off-site airplane," says Dick Mazourek, Flight Test Department director. "The concept has been in formation for several years now. The advent of advanced satellite communication technology makes it possible. We saw the potential that it offered us for possible off-site testing when we began to think about Edwards Air Force Base relative to the flight testing of the X-29."

Real-time flight testing is an old concept in terms of its use by Grumman. Begun early in the life of the F-14 program, real-time testing is a system in which flight test ground engineers interact directly with the pilot and his aircraft while it is in flight.

Front-end room. *Plant 7 first-floor computers receive the satellite signal after its 44,000 mile trip.*

Real-time info. *Flight test engineers coordinate data on a computer terminal and a brush table print-out sheet.*

The goal of the latest technological striving is the cost-effective utilization of Grumman resources in support of off-site flight testing via real-time satellite data links. "The idea," says Mazourek, "is to minimize the number of people and the amount of equipment that would have to be moved off-site for flight testing done away from Calverton."

Mazourek says, "We found a golden opportunity to try out this concept of conducting flight testing via satellite transmission when the Navy scheduled low altitude asymmetric thrust flight testing for F-14 1X with a GAC telemetry system at NASA Dryden Flight Research Facility in California."

Using the F-14 1X as a host vehicle, the proof-of-concept test involved the transmitting of the aircraft's real-time telemetry data back to the Grumman Flight Test Center at Calverton via an RCA satellite in space some 22,300 miles from Earth. "Grumman Information Resources Management (IRM) leased all the necessary satellite time and equipment from RCA mainly because, in this particular case, it was convenient," explains Ned Ferris, project manager of the satellite proof-of-concept test program. "NASA Dryden already had in-place an existing 10-meter RCA antenna and transmission and receiving earth station system, so it was easiest and most cost-efficient for us to go with the existing hardware and adapt our test needs accordingly," he points out.

In addition to the use of the RCA satellite and the Dryden ground station system, Grumman also leased from RCA a five-meter-round satellite transmission "receive-only" dish that has been positioned adjacent to the Plant 7 control tower. The signal that the dish receives originates from the aircraft flying 3,000 miles away in California but it actually travels about 44,000 miles in its trip to the Calverton ATS.

The data is first transmitted from the aircraft to a tracking antenna at Dryden. Once received, the signal is relayed up to the RCA F-5 satellite. The RCA satellite receives the signal from Dryden and relays it to the receiving dish outside of Plant 7 where a special heavy-duty 7/8 inch coaxial cable carries it to the ATS on the sixth floor. Next the signal is sent down to the first floor computer bank — called the "front end" in this operation.

There the signal is validated and converted from digital to analog form for the computer terminals and the reams of graph paper flowing off computer "brush tables." This whole winding trip takes an astonishing 1/4 second from the time the information is telemetered from the airplane to the time the flight test engineers see it on their screens at Calverton. "The time delay involved is negligible — in fact, it's not even fair to call it a delay. That's why we call this real-time testing," notes Ferris.

Operationally viable?

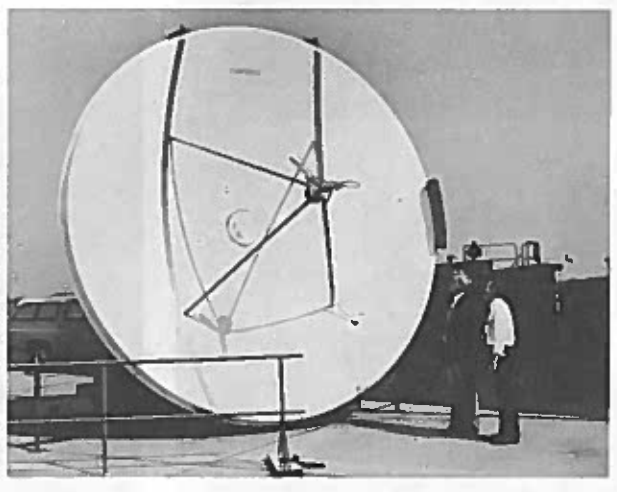
"This proof-of-concept testing gives us an idea of how well the concept will work for us in actual use. We know the technology involved is already proven and available. What we need to do in these tests is to satisfy ourselves from an operational point of view — to see if our idea was operationally viable," says Mazourek.

"The amazing thing that we have found is that, thus far, we have had a 100 percent success rate in virtually all phases of the test. The signal that we have been getting has been at least as good, and in most cases better, than that which we are used to in the direct real-time tests with the aircraft in the air right here at Calverton."

Mazourek also notes that virtually every program that Grumman is looking at for the future involves some off-site applications for this new concept. "The potential of off-site satellite communications and real-time testing is virtually unlimited," he says. "It will provide significantly better and more cost-effective utilization of our resource assets — both people and electronic equipment."

Ferris points out that testing of the concept will continue, with six or seven actual signal transmission tests to be done in April. "What we have to do in order to learn just how to use such a system — its operation, its limits, and its potential — is essentially go to school on it. In this kind of test work everything has to be within the acceptable technical criteria of real-time. So far, it looks like the concept works — and works very well," he says.

Indeed, Mazourek and Ferris say the concept in operation is a precursor to using satellite communications to tie all Grumman operations all over the globe together — a real communications future for the company.



Receive-only dish. *Ned Ferris (L), project manager, and Bruce Huppert are dwarfed by the five-meter-round satellite dish.*

Investment Plan '83 annual report

EIP investors find four funds' performance ranged from steady to sluggish

The four investment vehicles in the Grumman Employee Investment Plan (EIP) exhibited four distinct performance patterns during 1983 — ranging from steady to sluggish. That was the report presented to about 100 EIP investors who turned out for the eighth annual EIP meeting, held April 12 in Plant 28A.

What was probably the best news in 1983 for EIP investors occurred in September. Grumman announced that due to the strength of its business, the company's matching contribution would rise to 100 percent. Beginning fourth-quarter 1983, for every dollar an EIP investor contributed, up to 4 percent of pay, the company would contribute the equivalent in company stock.

Bob Bradshaw, vice president and secretary of Grumman Corporation and an EIP trustee, pointed out that the EIP's floating match rate was originally designed to fluctuate according to how well the company performed, and that 1983 was the first year the match rate rose above the previously-fixed rate of 75 percent.

Even keel

"By and large, all of the funds in the Employee Investment Plan did rather well in 1983," said Bradshaw. "For the eighteen month period beginning in January of 1982 through August of 1983, the company stock fund outperformed the other investment vehicles. It is, however, one of the more volatile issues."

Company stock rose in value to $61.50 per share in August, when a two-for-one stock split went into effect. That made the value of each share worth approximately half that figure.

Between August and the year's end, the stock fell, closing the year at $24.25 per share. Taking the stock split into account, that's up slightly from the $47.75 posted at the close of 1982.

The Equity Fund, though it performed very well for the year as a whole, slowed down considerably during the second half of the year.

"The first half of '83 saw a follow-through of the bull market that started back in August of '82," said Bill Parmentier, Grumman Corporation assistant treasurer. "Equity investment during the last half of 1983 was much more difficult — I guess you could almost characterize it as walking through a minefield."

The year saw a variety of changes in the Equity Fund portfolio, including a reduced representation in consumer staples. This is in sharp contrast to year-end 1982, when holdings in the consumer-staples area were up in anticipation of a consumer-spending boom. At the present time, however, that boom has slowed considerably.

Another change was a reduction in science and technology holdings, due in part to the increasingly competitive nature of that sector. However, the more stable holdings, such as IBM and NCR, were kept intact.

Due to a slowdown in the bond market, 1983 was a sluggish year for the Fixed Income Fund. Unit value was up 6.6 percent over year-end '82, slightly under the SEI median of 8 percent. SEI is an advisory firm that produces an index of major funds' performances.

Al Medaugh, senior vice president, Fiduciary Trust Company, which manages the Fixed Income Fund, noted that during '83, the part of the portfolio consisting of AAA bonds rose to about 90 percent — up from 75 percent at year-end 1982. Also, the portfolio no longer includes any single-A bonds. Thus, "the portfolio has quite a few conservative characteristics to it, a yield of somewhat over 12 percent, and a very high quality orientation."

What's ahead for those two funds? Fiduciary's President, Larry Huntington, predicted that the continued economic recovery will create a healthy long-term climate for intangibles — that is, fixed income and equity funds. He cited the lower inflation rate, "stimulative" government policies, rising corporate profits, and a rising gross national product as reasons for his optimism.

Huntingtons's short-term view was more cautious, however. He attributed his caution mainly to the size of the Federal deficit, "which the country shows no signs of resolving in the near future," he said.

For the Guaranteed Income Fund, the blended rate for 1984 will be 11.3 percent — down slightly from the 12.28 percent of last year. The blended rate is applied to all money on deposit during 1984.

In the past few years, the Guaranteed Income Fund outperformed the Standard & Poors 500. But in December, the S & P edged past the GIF by a slight margin.

"However, a thousand dollars in the Guaranteed Income Fund still did better than the same amount invested in money-market funds," said Norm Wells, of Aetna, the insurance company that managed GIF money for 1983.

A new wrinkle: starting this year, there will be two insurance companies managing GIF money. The new contract is with Mutual Benefit Life Insurance of Newark, New Jersey, and yields 13 percent. That figure has been averaged with those for the Aetna funds to produce this year's blended rate.

Healthy debut

PAYSOP (Payroll-based Stock Ownership Plan), which went into effect January, 1983, got off to a very healthy start. The plan provides each eligible employee with company stock. The contribution rate for the Plan's initial two years — 1983 and '84 — is .5 percent of an employee's annual salary.

The next three years' rates ('85, '86, and '87) will be .75 percent, unless changed by the Federal government.

"Those are small amounts," Bradshaw noted, "but they will add up over the years."

EIP questions answered at meeting

Why can't changes be made to the EIP more often than once every six months — for example, once every three months?

The intent of the EIP is for the long-term investment needs of employees — not short-term buying and selling. Also, with the 100 percent match, the EIP makes large stock purchases. Under SEC regulations, only a certain amount of stock may be purchased each day, based on the average volume for the last 20 days. This slows down the record-keeping process. The plan was intended to serve the investment needs of the vast majority of employees at a reasonable cost. Some members may wish to supplement the plan with their own investment programs.

Has the company considered raising the matched amount to a percentage above 4 percent? Do other companies have higher rates?

The company has considered doing this. Other companies do have higher rates — many, for instance, match up to 6 percent. Typically, though, those plans only match employee contributions by 50 percent.

Some of us who have been in the EIP since the beginning have a lot of Grumman stock. Could it be arranged to enable us to transfer some of that stock to another vehicle, when we near retirement?

That can already be accomplished when you leave the company and wish to keep your EIP account open. The company is looking at this issue carefully, giving some consideration to a one-shot transfer a few years before retirement. Such a change, however, would have to be structured in such a way as to avoid any adverse effects on the value of the Plan's Grumman common stock.

How will the split work in the Guaranteed Income Fund between Aetna and Mutual Benefit?

Money contributed during 1984 will go into an account at Mutual Benefit, which is for a five-year contract. Money from prior years will remain with Aetna. The EIP trustees are shopping for the best arrangement — and they plan to do so on an annual basis. It should be noted that the blended rate is guaranteed at 11.3 percent. It doesn't matter from the plan member's perspective whether the money is with Aetna or Mutual Benefit.

When the Guaranteed Income Fund first began, guarantees were made as to what the interest rates would be two or three years ahead. Is that done now, and if so, what will the projections be for the upcoming three years?

When the fund first started, not only did Aetna guarantee interest for the year, but they guaranteed a "floor" rate for subsequent years. That feature has been discontinued. There are two reasons. One, the Fund is getting a lot more complex than it used to be — there is more than one managing company, and more than one kind of investment vehicle. That makes future guarantees a little tough to calculate. Second, the floor rates were substantially below those that were later paid out. It's conceivable that in a doomsday scenario, those floor rates would have some meaning, but short of that they're meaningless.

E.J. Ciecwesz

J.E. Cummings

J.A. Walsh

T.C. Smith

E.J. Messer

M.J. Heaphy

R.J. Greene

J.L. Kuchcicki

B. Trapani

service milestones

A.O. Marhold

A.C. Posillico

A.P. Cusumano

R.G. Black

G.C. Geller

40

Benjamin E. Lindquist Jr., Elect. Fab. (1)
Raymond F. Amendola, Drop Hammer (2)
Edward J. Murphy, Prod. Eng. (2)
Alice M. Zvonik, Food Serv. (2)

Dateline: April 1944

Forty years ago this month . . . An all-star squad of Navy fliers who flew Hellcats and Avengers in virtually every major engagement in the Pacific theatre "whooped with glee" when Grumman's latest superfighter, the sleek F7F, is unveiled for their benefit at Bethpage. Word reaches Grumman that American fliers have increased their ratio of Japanese plane destruction from 3-1 in the first year of the war to 13-1 in recent battles. The first super Hellcats of the Dash 5 model are delivered; they are easily identified by the new dark blue slick paint job. The Grumman Bombers baseball team is finishing up spring training and getting ready for the opener against Mitchell Field.

35

Norman H. Pilkington, Prototype (1)
Edward C. Fink, Elect. Fab. (1)
Richard Morales, Stockrooms (1)
Robert E. Freund, Controls (2)
Conrad Vogel, Prod. Supervision (2)
Louis J. Napoli, Prod. Supervision (2)
John O'Neill, Malt. Offsite Supt. Cont. (2)
Forrest W. Gilreath, Prod. Cont. (2)
Christy Farrell, Prod. Cont. (2)
Sebastian S. Hollister, Assy. Methods (2)
Paul P. Stewart, Indust. Eng. (2)
Aldo J. Scavino, M & ME Mgmt. (2)
Robert Cruz, Q.C. Mgmt. (2)
Salvatore Vetrano Jr., Parts Paint (3)
Paul E. Smith, Assemblies (3)
Joseph L. Williams, Final Assy. (3)
Harry P. Diener, Honeycomb (3)
Howard T. Lynch, Prod. Cont. (3)
Arthur H. Ebert, Plant Serv. (3)
Robert B. Nielsen, Fus. Joining (5)
John W. Anderson, Supt. Equip. (5)
John R. Saxe, Proposal (5)
Peter J. Brenna, Instr. Plann. & Cont. (6)
Clinton Duplessis, Sys. Test (6)
George A. Okvist, Struct. Subsys. (6)
William Keane, Elect. Test (14)
Berthold J. Schauer, Invent. Cont. (21)
John L. Dwyer, PMM — Mil. & Space (25)
William A. Caputo, Repair Cont. (30)
George Petronio, Veh. Des. (35)
George W. Stahl, Prod. Cont. (43)
Peter Lackey Jr., Scheduling (43)
Edward V. Bergeman, Elect. Lia. Eng. (43)
Roswell W. Norton, Elect. Cable Fab. (44)
Thomas C. Breidenstein, Elect. Box & Pan Fab. (44)
Robert S. Gent. Fld. Ops. (281)
John W. Moseman, Fld. Ops. (294)

Dateline: April 1949

Thirty-five years ago this month... With the introduction of a new Grumman plane called the Guardian nearing, the U.S. Navy sends a provision team to Bethpage to set up support programs for the new plane whose mission is to seek out and destroy enemy submarines.... *Plane News* reports in April 14 issue that Grumman scholar Richard Feyk will join the engineering staff this June. Feyk has the highest scholastic standing in the mechanical engineering Class of 1949 at Cornell. . . .Softball great Roy Stephenson is appointed commissioner of Grumman softball leagues. Over 50 teams have already signed up for the season. Stephenson's jet-propelled deliveries have made the Grumman Yankees a constant threat to the National ASA title.

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Marjorie E. Stewart, Bus. Mgmt. & Admin (2)
Paul J. Monaghan, Maint. Admin. (3)
Robert Milhaven, Maint. Rearr. (3)
William Twinem, Mach. Parts Insp. (3)
Paul F. Woyke, Maint. Rearr. (5)
Sherrill C. Raynor, Paint (6)

W.E. Farley

M.A. Greene

R.G. Detke

D.R.Wagner

C.E. Dailey

E.J. Agolia

J.F. Pirola Jr.

R.H. Willsey

R.N. Jonassen

A.A. Arnister

F.P. Losee

L.P. Petersen

F.J. Meinhart

S.J. Giacoia

L.J. Czerepkowsk

W.F. Ecklund

J.A. Maclean

L.N. Willers

R.C. Perinka | L.G. Angeloff | D.G. Lamberson | B.F. Dolan | D.A. Burk | D.G. Frakes | R.M. Cegelski | R.J. Combs | D. Shannon

J.C. Schroeder | J.R. Laia | F.A. Elsner Jr. | H.E. Peck | W.D. Looney | J.J. Murnane | A. D'Amico | R.A. Westberg | D.P. Leary

John C. Ferragamo, Prod. Rel. & Anal. (6)
Eugene A. Titus, Flt. Safety (7)
Thomas Coll, Maint. Rearr. (12)
Heinz R. Tischler, Maint Facil. Equip. (12)
Joseph A. Dudek Jr., Maint. Rearr. (14)
Donald F. Waller, Simulation (14)
Albert E. Hey, Training Sys. (47)

Dateline: April 1954

Thirty-years ago this month .... Three Grumman F9F-6 Cougars — production models — smash the trans-U.S. speed record by making the 2,483 mile dart in 225.5 minutes. The company puts the finishing touches on its new facilities called Peconic River (now Calverton Operations). In addition, a new improved Cougar — with modified wings and a longer fuselage — is being phased into production. It is designated F9F-8 . . . . One of the most exciting shots in the upcoming Cinerama movie, "The Thrill of Your Life," shows a Cougar seemingly heading right at the camera as it comes in for a landing aboard the carrier USS Lake Champlain.

25

Edward J. Ciecwesz, Prototype (1)
Harold J. Dwyer, Stockrooms (1)
Henry G. Wittman Jr., ILS Commodities Cont. (1)
James E. Cummings, ILS Ops. Supt. (1)
John A. Walsh, EBW Machining (2)
Thomas C. Smith, Prod. Cont. Maj. Assy. (2)
Ernest J. Messer, Stockrooms (2)
Matthew J. Heaphy, Jigs & Fix. (2)
Roy J. Greene, Machine Shop (2)
James L. Kuchcicki, Form Block (2)
Benedict Trapani, Form Block (2)
William E. Farley, Jig. Det. & Sub. Assy. (2)
Raymond Hall, Ind. Eng. (2)
Melvin A. Greene, Food Serv. (2)
Richard G. Detke, Conv. Machines (3)
Frank J. Santagata, Conv. Machines (3)
Donald R. Wagner, Conv. Machines (3)
Charles A. Mahoney, Details (3)
Charles E. Dailey, Elect. Test (4)
Lewis Kasuga, ILS Sys. Concepts (4)
Edward J. Agolia, Mfg. Budg. (5)
Joseph F. Pirola Jr., Crew Sys/Equip. (5)
Robert H. Willsey, Struct. Test (5)
Gerald F. Bostock, Proposals (5)
Robert N. Jonassen, Funct. & Proj. Admin. (5)
Alfred O. Marhold, Tech. Pres. Serv. (5)
Alfred C. Posillico, Corp. Instr. Gd. Test (5)
Anthony P. Cusumano, Airframe Sys. (5)
Robert G. Black, Grumman Corp. (5)
George C. Geller, Inst. Test (6)
Arnold A. Arnister, Prod. Mgmt. (6)
Frederick P. Losee, Final Assy. Insp. (6)
Lawrence P. Petersen, Aircraft Prog. (7)
Frederick J. Meinhart, Corp. Inst. Sys. (7)
Santino J. Giacoia, Mfg. Bus. Mgmt. (9)
Leo J. Czerepkowsk, Maint. Rearr. (12)
Walter F. Ecklund Jr., Meas. Stds. Lab. (12)
Roy L. Remsen, Camera Graphics (15)
John A. MacLean, ILS Tech. Writing (15)
Louis N. Willers, ILS Tech. Writing (15)
Robert C. Perinka, Trans. Oper. (20)
Lloyd G. Angeloff, Cont. & Mech. (25)
Dane G. Lamberson, Performance (25)
Donald A. Burk, Field Admin. (28)
Bertrand F. Dolan, Proj. Mgmt. (30)
Dennis G. Frakes, Maint. Admin. (30)
Ronald M. Cegelski, ILS Resource Cont. (35)
Richard J. Combs, ILS Prog. Mgmt. (40)
David Shannon, ILS Tech. Serv. (40)
John C. Schroeder, Pwr. Plt. Des. (40)
Joseph R. Laia, Performance (40)
James K. Brown, Comp. Equip. Des. (40)
Herman S. Binder, Prog. Engr. Mgr. (40)
Fred A. Elsner Jr., Conf. Data Mgt. (40)
Howard E. Peck, Prog. Mgmt. (43)
William D. Looney, Prog. Mgmt. (43)
Joseph J. Murnane, Recv. Insp. (44)
Thomas J. Reid, ILS Sys. Concepts (47)
Anthony DiAmico, Tech. Ops. (77)
Ronald A. Westberg, Tool Eng. (77)
David P. Leary, St. Aug. (265)

Dateline: April 1959

Twenty-five years ago this month . . . U.S. Navy awards Grumman two contracts — one for A2F-1 (later known as A-6) and one for W2F-1 (later known as E-2). The A2F-1 is a new jet attack plane, while the W2F-1 is being lauded as "one of the most sophisticated and futuristic aircraft of our times," according to company president Jake Swirbul. It will be a replacement for the WF-2 Tracer as the Navy's early warning aircraft.

The Grabbers snatch title

After compiling a record of 12 wins and two losses and missing a perfect season by only two points, The Grabbers swept the playoffs and grabbed the championship title in the Grumman intramural basketball league.

With The best record in the league, the Grabbers drew fourth place finishers The Brutal Bunch in the first game of the playoffs. After trailing for the first three quarters of the game, The Grabbers' Bob Beattie scored 16 of his game-high 32 points in the last quarter including four key foul shots in the closing seconds to lift his team to a 69 to 67 victory.

The win moved the team into the finals against Hurt'n 4 Cert'n. In the double elimination finals, The Grabbers made short work of Hurt'n 4 Cert'n, winning the first game, 70-64, as Beattie and Mark Cleary paced the team with 26 points and 20 points, respectively.

Wrapping it up

In the second and decisive game of the finals, The Grabbers overcame a four point deficit late in the fourth quarter to clinch the championship. Cleary topped all other scorers with 23 points while Beattie added 17 points in the 74-67 win.

Giordano honored by LISL

When Grumman formed a softball team to compete in the Long Island Industrial Softball League back in 1960, John Giordano was there. And for more than 20 years since then, he has been involved with the team in some capacity as both a player and a coach at different times. As varsity head coach, he led the Grummanites to their first and thus far only World Championship in 1967.

Retired from the game these days, John, a group leader in the Pl. 2 stock room, is being recognized for his long years' involvement as an innovator and tireless worker in the Long Island Softball League.

The LISL committee is inducting John into its Hall of Honor. "I'm really thrilled to be honored by the league like this. All the years playing and coaching were a lot of work, but, really, it was mostly a lot of fun," says John.

"I've been working in Grumman for 34 years now and I've been involved in softball for what seems like just about all of my life. I may be getting a little too old to participate anymore, but I'll never forget all the good times and being honored by the league like this is really just great," he adds.

Honoree. *John Giordano has been inducted into the Long Island Softball Hall of Honor for his years of service with the Grumman varsity softball team.*

scorecard

Tennis tryouts

Tennis hackers, read no further. GRA is holding tryouts for the Grumman varsity tennis team on May 21, 22, and 29 at the Bethpage Tennis Center from 5 to 7 p.m. All play is doubles. If you are interested in trying out for the team, fill out the form on this page and mail it to the GRA office: A01-28A, by May 11, 1984. Grumman men and women are eligible.

High rollers

Interested in seeing a few Easter bunnies of the adult variety? Or perhaps you're in the "baby needs a new pair of shoes" mood. Well then, it's time for you to head down to the Atlantic City Playboy Club and Casino.

Grumman Recreation is sponsoring a "quickie" one day junket to the East Coast gambling mecca on Wednesday, May 30. Leaving at 9 a.m. from the overflow parking field directly opposite the Grumman runway in Bethpage, the motorcoach excursion will return to Long Island at approximately 11 p.m. the same day.

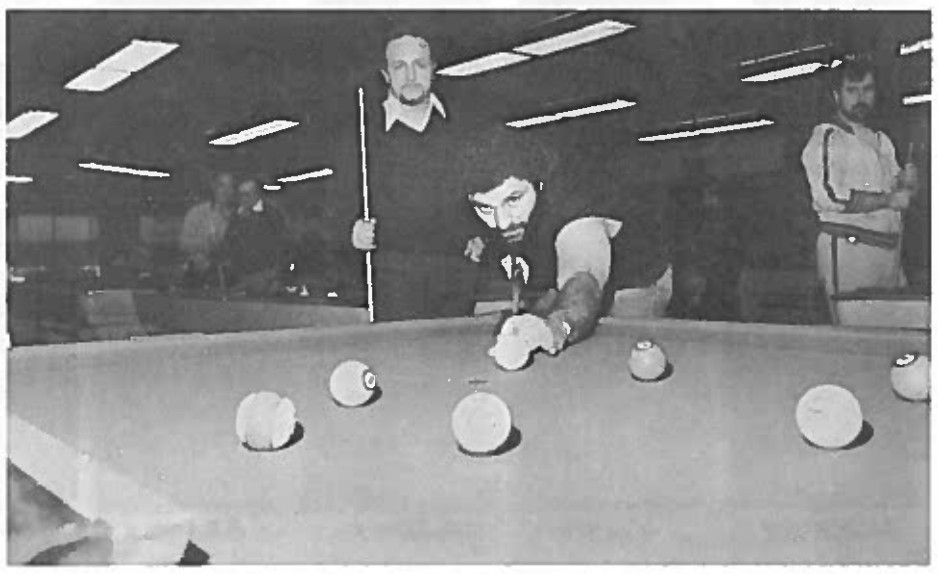
Round-trip transportation, a $10 cash refund and a $7 food certificate are included in the per-person price tag of $12.50. Full payment is required at the time of reservation, in cash or a check payable to Grumman Recreation. For further information, call Recreation, Ext. 2133.

BonForti wins

Players beware — there is a shark in the pool. In the pool hall that is — and his name is George BonForti. George, a mechanical engineer in Melville's Pl. 40, recently outlasted a large field of other fine pool players to emerge as the champion of Grumman's 23rd Annual Pocket Billiards Tournament.

George climbed back from the losers bracket of the double-elimination tourney to defeat John DeMarco, a perennial final-round player and several times champ of the tournament.

BonForti won the final two games by scores of 100-72 and 100-63 in what he says was his first straight pool competition. "I just came out here from California this past November and back there I only played in eight ball and nine ball tournaments. After this though, I think I prefer straight pool." Willie Marconi and Minnesota Fats better watch out.



Pool shark. *No hustle here as George BonForti lines up a shot on his way to winning the 23rd Annual Grumman Pocket-Billiards Tournament championship. John DeMarco, second place finisher and former champion, looks on.*

Tennis varsity tryouts

Registration form

Name: .....

Perm. #: .....

Extension: ..... Mail stop: .....

Mail to: GRA, A01-28A, by May 11

calendar

Aikido Club: (Martial Arts) every Wed., 5 p.m., Recreation bldg. Beginners class. Guests welcome. M. Brooks, Ext. 115-6171/H. Brondo, Ext. 2719.

Alcoholics Anonymous: every Mon., 4:30 p.m., Plant 15, conference room C, closed meetings; Personnel Relations, Ext. 3521. Great River meetings: every Wed., 4-5 p.m. T. Conley, Ext. 3521. Calverton: Chemical Dependency Discussion Group, every Mon., 4-5 p.m., Flt. Test Center, new conference meeting room, open meeting, Personnel, 369-6759. C. Robb, Ext. 117-7038.

Amateur Radio Club: every 3rd Wed. of the month. Plant 5 conference room BD-1, 5 p.m. B. Wengler, Ext. 4187.

Chess Club: every Fri., Recreation bldg., 5 to 11 p.m. Beginner to Expert, guests welcome. K. Marley, Ext. 4901/N. Corso, Ext. 9600.

Computer Club: 1st Mon. of every month, Recreation bldg., 7 p.m. Computer discussion and demonstration/beginner to advanced programming. Guests welcome. J. Hayne, Ext. 4945/P. Frumkin, Ext. 5134.

GRUMMAN planenews

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